in which said organic compound is selected from the group consisting of vinylene carbonate, propargyl carbonate, benzaldoxime methylcarbonate, a sulfone compound, a sulfonate compound, a sulfone compound, and phenylacetylene.

A1 cont'd

3. (amended) The non-aqueous electrolytic solution of claim 1, in which said one organic compound has a reduction potential equal to a reduction potential of another organic compound or a reduction potential loser or higher than a reduction potential of another organic compound by a potential of less than 0.2V.

4. (amended) The non-aqueous electrolytic solution of claim 3, in which said one organic compound has a reduction potential equal to a reduction potential of another organic compound or a reduction potential lower or higher than a reduction potential of another organic compound by a potential of less than 0.05 V.

A2

5. (amended) The non-aqueous electrolytic solution of claim 1, in which said one organic compound is vinylene carbonate, propargyl carbonate, or benzaldoxime methylcarbonate, and another organic compound is a sultone compound, a sulfonate compound, or a sulfone compound.

6. (amended) The non-aqueous electrolytic solution of claim 1, in which said one organic compound is vinylene carbonate or methyl propargyl carbonate and another organic compound is 1,3-propanesultone, 1,4-butanesultone, 1,4-butanediol dimethane sulfonate, or ethylene glycol dimethane sulfonate.

7. (amended) The non-aqueous electrolytic solution of claim 1, in which said one organic compound is benzaldoxime methylcarbonate and another organic compound is divinylsulfone.

15. (amended) A non-aqueous lithium secondary battery which comprises a positive electrode comprising lithium complex oxide, a negative electrode comprising graphite, a non-aqueous electrolytic solution containing an electrolyte salt in a non-aqueous solvent, and a separator, in which the non-aqueous electrolytic solution comprises at least two organic compounds dissolved in a solvent comprising a cyclic carbonate and a chain carbonate, in an amount of 0.1 to 4 weight % for each compound in which bot of said two organic compounds have reduction potential higher than reduction potentials of the cyclic and chain carbonates in which one of the organic compounds has a reduction potential equal to a

A3

reduction potential of another organic compound or has a reduction potential lower or higher than a reduction potential of another organic compound by a potential of less than 0.4 V and

A3 cont'd

in which said organic compound is selected from the group consisting of vinylene carbonate, propargyl carbonate, benzaldoxime methylcarbonate, a sulfone compound a sulfonate compound a sulfone compound and phenylacetylene.

17. (amended) The non-aqueous lithium secondary battery of claim 15, in which said one organic compound has reduction potential equal to a reduction potential of another organic compound or a reduction potential lower or higher than a reduction potential of another organic compound by a potential of less than 0.2 V.

18. (amended) The non-aqueous lithium secondary battery of claim 15, in which said one organic compound has reduction potential equal to a reduction potential of another organic compound or a reduction potential lower or higher than a reduction potential of another organic compound by a potential of less than 0.05 V.

A4

19. (amended) The non-aqueous lithium secondary battery of claim 15, in which said one organic compound is vinylene carbonate, propargyl carbonate or benzaldoxime methylcarbonate and another organic compound is a sultone compound a sulfonate compound, or a sulfone compound.

20. (amended) The non-aqueous lithium secondary battery of claim 15, in which said one organic compound is vinylene carbonate or methyl propargyl carbonate and another organic compound is 1,3-propanesultone, 1,4-butanesultone, 1,4-butanediol dimethanesulfonate, or ethylene glycol dimethane sulfonate.

21. (amended) The non-aqueous lithium secondary battery of claim 16, in which said one organic compound is benzaldoxime methylcarbonate and another organic compound is divinyl sulfone.